P16 Organ pipe A, with both end open, has a fundamental frequency of 425 Hz. The fifth harmonic is set organ pipe, with one open end, has the same frequency as the second harmonics of pipe A. How long are pipe A and B?

Pipe A

Pipe B

P32. Two sounds differ in sound level by 3.00 dB. What is the ratio of the greater intensity to the smaller intensity?

P52. In Fig. 17-32, sound with a 65.0 cm wavelength travels rightward from a source and through a tube that consists of a straight portion and a half-circle. Part of the sound wave travels through the half-circle and then rejoins the rest of the wave, which goes directly through the straight portion. This rejoining result in interference. What is the smallest radius r that results in an intensity minimum at the detector?

*πr*

 

2*r*

62. The pressure in a traveling sound wave is given by the equation

. Find the (a) pressure amplitude, (b) frequency, (c) wavelength, and (d) peed of the wave.

66. From two sources, sound waves of frequency 270 Hz are emitted in phase in the positive direction of x-axis. At a detector that is on the axis and 5.00 m from one source and 4.00 m from the other source, what is the phase difference between the waves (a) radians and (b) as multiple of wavelength?

5 m

4 m

D

S2

S1

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